

### **Abstract**

A beam folder increases optical length with polarizing beam splitters and reflectors that repolarize a beam by retarding it. An incident beam encounters the beam splitters multiple times, and are both passed and rejected by the same splitters. The splitters and repolarizing reflectors can be shaped to perform optical functions in a smaller volume. Valves and controls can vary the beam intensity and combine multiple beams. Applications include projection, imaging, collimating, mixing, and balancing.

5